



**UNITED STATES PATENT AND TRADEMARK OFFICE**

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/512,629	02/25/2000	Henrik Nyberg	040000-593	7131

27045 7590 08/13/2003

ERICSSON INC.  
6300 LEGACY DRIVE  
M/S EVW2-C-2  
PLANO, TX 75024

EXAMINER

FAN, CHIEH M

ART UNIT	PAPER NUMBER
----------	--------------

2634

DATE MAILED: 08/13/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/512,629

Applicant(s)

NYBERG ET AL.

Examiner

Chieh M Fan

Art Unit

2634

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 25 February 2000.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 9-13 and 16-30 is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☒ Claim(s) 14 and 15 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 February 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All   b) ☐ Some \*   c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                  | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>4</u> . | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Drawings***

1. Figures 1 and 2 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated (Figs 1 and 2 are associated with the background section of the present application). See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### ***Claim Objections***

2. Claims 14 and 15 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. In particular, claim 9, on which claim 14 depends, recites the step of re-allocating one or more of said plurality of frequency hopping sequences until networks performance is optimized. Such step clearly implies that whether network performance is optimized has to be determined first. Therefore, the recited limitation in claim 14 fails to further limit claim 9.

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 1, claim 1 recites a step of "selecting the allocated frequency hopping sequence for a connection associated with the cell, in accordance with a frequency hopping sequence allocation strategy". Since the frequency hopping sequence (FHS) has been allocated, it is not clear how to select the allocated FHS according to a frequency hopping sequence allocation strategy (emphasis added). It is also not clear which portion of the specification is referred to the recited selecting step.

Regarding claims 3, 4 and 6, the recited limitations therein are not understood. It appears that a word is missing between the words "is" and "based" in the first line of each of claims 3, 4, and 6.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

Art Unit: 2634

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

6. Claims 1, 2, 7 and 8 are rejected under 35 U.S.C. 102(e) as being anticipated by Haartsen (U.S. Patent No. 6,009,332, provided by the applicants in IDS filed 11/28/00, PTO Paper #4).

Regarding claims 1 and 7, Haartsen teaches a method for assigning a frequency hopping sequence in a telecommunication network comprises the steps of: allocating a frequency hopping sequence to a cell within the network as a function of a level of interaction between the frequency hopping sequence and each of a plurality of other frequency hopping sequences (see abstract, col. 3, lines 5-63, that is a frequency hopping sequence with the least interference is selected); and selecting the allocated frequency for a connection associated with the cell at set-up (col. 11, lines 13-35).

Regarding claim 2, as explained above, Haartsen teaches selecting the frequency hopping sequence with the least interference. Haartsen also teaches that interference is referred to the collisions (col. 3, line 29).

Regarding claim 8, Haartsen also teaches a handover to a better frequency hopping sequence when the link quality deteriorates (col. 11, lines 24-26). Therefore, Haartsen also teaches assigning the allocated frequency hopping sequence to the connection, wherein the connection is an existing connection.

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 3-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haartsen (U.S. Patent No. 6,009,332) in view of Noll Barreto et al. (U.S. Patent No. 6,223,048).

Haartsen teaches the claimed invention including a communication system that is compatible to an existing cellular digital TDMA standard like GSM (col. 1, lines 32-37). Haartsen does not particularly teach that the frequency hopping sequences are generated based on a hopping sequence number (HSN), a Mobile Allocation Index Offset (MAIO) value and a frame number (FN) shift. Noll Barreto et al. teaches that, from the ETSI Standard GSM 05.02, version 5.1.0, a frequency hopping sequence is generated based on HSN, MAIO and FN (col. 1, lines 21-54). Therefore, it would have

Art Unit: 2634

been obvious to one of ordinary skill in the art at the time the invention was made to generate a frequency hopping sequence based on HSN, MAIO and FN so as to conform to the GSM standards.

### ***Allowable Subject Matter***

9. Claims 9-13, and 16-30 are allowed.

### ***Conclusion***

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Cadd (U.S. Patent No. 5,586,120), Cadd et al. (U.S. Patent No. 5,528,622), Flammer, III et al. (U.S. Patent No. 5,515,369), Avery et al. (U.S. Patent No. 5,287,384) and Smith (U.S. 4,850,036) teach frequency hopping communication systems.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chieh M Fan whose telephone number is (703) 305-0198. The examiner can normally be reached on Monday-Friday 8:00AM-5:30PM, Alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on (703) 305-4714. The fax phone numbers

Art Unit: 2634

for the organization where this application or proceeding is assigned are (703) 872-9314 for regular communications and (703) 872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4750.

  
Chieh M Fan  
Examiner  
Art Unit 2634

cmf  
August 10, 2003